

ATTACHMENT A

Remarks

By this Amendment, a typographical error has been corrected in an dependent claim. It is submitted that the present application is in condition for allowance for the following reasons.

In the *Claim Objections* section of the Detailed Action, the examiner has noted the long present typographical error occurring in claim 74. Therefore, by this Amendment, the typographical error has been corrected in a self-evident manner.

In the *Claim Rejections – 35 USC § 112* section, claims 65, 80 and 81 were rejected for containing subject matter not described in the specification in such a way as to convey to one skilled in the art that the inventor had possession of the claimed invention. This rejection is traversed for the following reasons.

In making this rejection, the examiner has specifically alleged that applicant was not in possession of the subject matter related to having “two TV cameras being pointed in a same direction away from the display” as recited in claim 65 or the similar recitation of “two TV cameras pointed in the same direction” as recited in claims 80 and 81. In particular, the examiner has stated that “there is no description explaining how the direction or placement of the TV cameras are placed on the display” (*sic*). This phrasing of the examiner is not understood, as the “directions” (pointing directions) of the TV cameras are not “placed” on the display, and the “placement” of the TV cameras are not “placed” on the display. It is believed that the examiner is objecting to the lack of any description of the mounting of the TV cameras relative to the display to achieve the claimed limitations, so this is the issue which will be addressed. *However, if this is not the*

correct issue, the examiner is requested to telephone the undersigned immediately to explain what is meant by this rejection (as the written rejection otherwise does not make sense) so that applicant can respond immediately thereafter.

Regarding the lack of any description of the mounting of TV cameras relative to a display, it must first be considered what the level of those skilled in the art is. In the context of the present invention, and the art cited there against, it is evident that the level of skill must be fairly high, beyond the level of a mere technician and undoubtedly encompassing someone with at least an engineering degree or equivalent work experience. As such, the person skilled in the art would be expected to have a good knowledge of the usages of TV cameras as inputs to computers, and the multitude of ways that such cameras could be mounted and adjusted – particularly as such cameras are, and have been for some time, **routinely** used in the computer data acquisition field.

In addition, it will be noted that most of the references made of record in this application show cameras which are pointed and mounted, but which do not disclose any of the details thereof (e.g., the just-cited Mack patent, the Zimmerman patent, the Oh patent, the Kumar patent, etc.). This further and conclusively shows that those of ordinary skill consider such matters to be routine, and hence not required to evidence possession of an invention related to such mountings and pointings of TV cameras.

Further, it will be noted that there is evidence of how such TV cameras would be mounted and pointed, as would be easily and quickly recognized by those of ordinary skill, in many of the figures of the present application, such as: figures 2b, 4, 5b, 6, 14/19 (mounted atop a computer), or figure 16 (where the cameras are embedded in the laptop flip-up screen).

Finally, as made evident in the Remarks section of the last response, the addition of the objected to language is made to reinforce the idea that a "stereo pair of images" is used with the present invention. Those of ordinary (and it is asserted, less than ordinary) skill would readily appreciate that, in order to form such a stereo pair of images with cameras, that the cameras would have to be pointed in a same general direction. Consequently, this limitation would be considered by those of ordinary skill to be inherent in the teaching of the stereo pair of images discussed in the application.

It may be that the examiner's rejection is actually based on the lack of a specific discussion in the specification of how a camera would be mounted and pointed, rather than on the evident allegation that those of ordinary skill would not believe that the inventor possessed the knowledge of how to perform such routine mountings and pointings. As noted above, those of even less than ordinary skill in the art would be well aware of how to accomplish such mounting and/or pointing. Further, it is a well-established principal, as cited in the case law, that

the failure of the specification to specifically mention a limitation that later appears in the claims is not a fatal one when one skilled in the art would recognize upon reading the specification that the new language reflects what the specification shows has been invented. See All Dental Prodx LLC v. Advantage Dental Products, Inc., 64 USPQ2d 1945, 1948 (Fed. Cir. 2002) [which in turn cites Eiselstein v. Frank, 34 USPQ2d 1467, 1470 (Fed. Cir. 1995)].

Thus, those of ordinary (and less than ordinary) skill would readily recognize that the present inventor did have possession of the invention including the routine knowledge of mounting and pointing a camera as now claimed.

In view of all of the above, it is submitted that the rejection of claims 65, 80 and 81 under § 112, first paragraph, is improper and should be withdrawn.

In the *Claims Rejection* – 35 USC § 102 & § 103 sections, claims 65-81 (all claims present in the application) were rejected as being anticipated by, or obvious over, the newly cited Mack patent. These rejections was specifically based on § 102(e), in order to antedate the August 21, 1998 filing date of the present application with the July 29, 1998 filing date of the Mack patent. However, the present application claims benefit of (1) provisional application Serial No. 60/056,639 filed August 22, 1997 and (2) provisional application Serial No. 60/059,561 filed September 19 1997 - see the Amendment filed January 17, 2002.

Therefore, as the present application and claims are entitled to the benefit of the earlier filing dates of the two above noted provisional applications, the Mack patent is not prior art to the present invention so that the rejections of the pending claims under § 102 and 103 are improper and should be withdrawn.

For all of the foregoing reasons, it is submitted that the present application is in condition for allowance and such action is solicited.

ATTACHMENT B
Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

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1-64 (canceled).

65. (previously presented) A method for input by a person of data to a computer having a display comprising the steps of:

- providing at least two spaced TV cameras provided on said display, said at least two TV cameras being pointed in substantially a same direction away from said display for acquiring at least a stereo pair of images of one or more datums associated with the person;
- photogrammetrically determining, from said stereo pair of images acquired by said TV cameras, the three dimensional position of at least one of said datums; and
- controlling said display based on said position of said datum or datums.

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66. (previously presented) A method according to claim 65, wherein said cameras are located on opposite sides of said display.

67. (previously presented) A method according to claim 65, wherein at least one of said datums is a natural feature of the person or clothing worn by the person.

68. (previously presented) A method according to claim 65, wherein at least one of said datums is an artificial feature on the person or clothing worn by the person.

69. (previously presented) A method according to claim 65, wherein at least one of said datums is distinguishable in reflected light.

70. (previously presented) A method according to claim 65, wherein a light source proximate each TV camera is used to illuminate said datums.

71. (previously presented) A method according to claim 65, wherein said display provides 3D graphical data concerning a virtual object which is manipulated by the person.

72. (previously presented) A method according to claim 65, wherein datums on additional persons or portions thereof are sensed by said cameras, and information concerning position thereof is determined.

73. (previously presented) A method according to claim 65, wherein orientation of a portion of the person is also determined.

74. (currently amended) A method according to claim 73, wherein the determined position and orientation is used to determine the point on a display indicated by of the person pointing at the display.

75. (previously presented) A method according to claim 65, wherein at least one of said datums is retroreflective.

76. (previously presented) A method according to claim 65, wherein an IR LED light source is used to illuminate said datums.

77. (previously presented) A method according to claim 65, wherein at least one of said datums is distinctive in color or shape.

78. (previously presented) A method according to claim 65, wherein at least one of said datums is in the shape of a point or line.

79. (previously presented) A method according to claim 65, wherein at least one of said datums is associated with a finger of the person

80. (previously presented) A method for input by a person of data to a computer having a display comprising the steps of:

- providing at least two spaced TV cameras, said at least two TV cameras being pointed in substantially a same direction for acquiring at least a stereo pair of images of datums associated with the person;
- determining, from said stereo pair of images acquired by said TV cameras, the three dimensional orientation of said datums; and
- controlling said display based on said orientation of said datums.

81. (previously presented) A method for input by a person of data to a computer having a display comprising the steps of:

- providing at least two spaced TV cameras, said at least two TV cameras being pointed in substantially a same direction for acquiring at least a stereo pair of images of datums associated with the person, at least one of said datums being a natural feature associated with said person;
- photogrammetrically determining, from said stereo pair of images acquired by said TV cameras, the three dimensional orientation of at least said at least one datum; and
- controlling said display based on said orientation of said at least one datum.